Snohomish County Public Works

PUBLIC NOTICE

DETERMINATION OF NONSIGNIFICANCE (DNS)

PROJECT NAME: 2016-2020 County Bridge Maintenance and Repair Program

DESCRIPTION OF PROPOSAL:
Snohomish County maintains an inventory of 201 bridges. Each bridge is inspected at regular intervals. Projects identified on a yearly basis are proposed in response to bridge inspections, and to comply with local, state and federal bridge standards. Maintenance and repair of the County's bridges generally consist of: painting steel bridge components, steel repairs, concrete repairs, timber bridge repairs, bridge railing repair and replacement, deck expansion joints, and riprap and scour protection. Most maintenance activities take place during the dry season (July – October) with work durations ranging from less than one day to a week or more.

LOCATION OF PROPOSAL:
Bridge maintenance and repair are located at County-owned bridges throughout unincorporated Snohomish County

APPLICANT AND CONTACT PERSON:
Contact: Mary Auld, Senior Planner
Snohomish County Public Works
3000 Rockefeller Ave., M/S 607
Everett, WA 98201
(425) 388-3488 extension 4510
mary.auld@snoco.org

LEAD AGENCY: Snohomish County Public Works (Lead Department)

THRESHOLD DETERMINATION:
The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030(2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public upon request.

PUBLIC COMMENT AND APPEAL PERIOD:
There is a concurrent 14-day comment and appeal period on this DNS. The public is invited to comment on this proposal according to the schedule below. The file is

available for review at Snohomish County Public Works, 3000 Rockefeller Ave., Robert J. Drewel Building, 2nd Floor, Customer Service Center, Everett, Washington. Please contact Mary Auld for assistance prior to arriving at the Customer Service Center.

Comments on the DNS addressing environmental issues must be submitted in writing by 5:00 PM, on November 16, 2015. Written comments will be considered and may cause the DNS to be revised. Appeals to the DNS must be submitted in writing also by 5:00 PM, on November 16, 2015.

RESPONSIBLE OFFICIAL:

Signature: _____ **Date:** October 28, 2015

Steven E. Thomsen, P.E., Public Works Director

Disclaimer: The issuance of this Determination of Non-Significance (DNS) should not be interpreted as acceptance or approval of this proposal as presented. Snohomish County reserves the right to deny or approve said proposal subject to conditions if it is determined to be in the best interest of the County and/or necessary to the general health, safety, and welfare of the public to do so.

SEPA PROGRAMMATIC DISTRIBUTION LIST:

Tribal Government
Muckleshoot Tribe
Samish Indian Nation
Sauk-Suiattle Tribe
Skagit River System Cooperative
Snoqualmie Tribe
Stillaguamish Tribe
Suquamish Tribe
Swinomish Indian Tribal Community
Tulalip Tribes
Upper Skagit Indian Tribe

Federal Agencies
Army Corps of Engineers
Fish and Wildlife Service
National Marine Fisheries Service

State Agencies
Department of Archaeology and Historic Preservation
Department of Ecology
Department of Fish and Wildlife
Department of Natural Resources
Department of Transportation

Other
Snohomish County Planning and Development Services
Snohomish County Department of Parks and Recreation
Adopt-a-Stream Foundation
Snohomish Conservation District
Futurewise

Title VI and Americans with Disabilities Act (ADA) Information: It is Snohomish County's policy to assure that no person shall on the grounds of race, color, national origin, or sex as provided by Title VI of the Civil Rights Act of 1964, as amended, be excluded from participation in, be denied the benefits of, or otherwise be discriminated against under any County sponsored program or activity. For questions regarding Snohomish County Public Works' Title VI Program, or for interpreter or translation services for non-English speakers, or otherwise making materials available in an alternate format, contact the Department Title VI Coordinator via e-mail at spw-titlevi@snoco.org or phone 425-388-6660. Hearing/speech impaired may call 711.

Snohomish County Public Works

ENVIRONMENTAL CHECKLIST

Purpose of Checklist:
Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

SUMMARY

A. BACKGROUND

1. Name of proposed project:
   2016-2020 Snohomish County Bridge Maintenance and Repair Program

2. Name of applicant:
   Snohomish County Public Works

3. Address and phone number of applicant and contact person:
   Contact person:
   Mary Auld, Senior Planner
   Snohomish County Public Works
   Transportation and Environmental Services Division
   3000 Rockefeller Avenue, M/S 607
   Everett, WA 98201

   (425) 388-3488 ext. 4510 or
   mary.auld@snoco.org

4. Date checklist prepared:
   October 20. 2015

5. Agency requesting checklist:
   Snohomish County

6. Proposed timing or schedule (including phasing, if applicable):
This SEPA Checklist is prepared for bridge maintenance and repair activities for the period of January 2016 to December 2020. Bridge maintenance and repair activities may be conducted, as needed, throughout the year. These activities are weather dependent and are typically conducted between July and October when streams and rivers are in a low-flow period. The exception is bridge washing, which is typically conducted during high-flow periods between November and May of the following year. All work will conform to work windows identified in government approvals or permits. Work duration would range from less than one week to three months for individual maintenance activities. After maintenance activities begin, they are sometimes halted for several weeks to a month or more due to weather conditions and dependent upon scheduling.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.
Bridge maintenance and repair activities are anticipated to be on-going and extend beyond the January 2016 to December 2020 timeframe proposed in this SEPA Checklist.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.
***Regional Road Maintenance Endangered Species Act (RRMESA) Program Guidelines*.**
The RRMESA Program Guidelines provide a consistent, regional program that is used by Snohomish County (County) Public Works, Road Maintenance Division to limit, reduce, or eliminate take of threatened species under the 4(d) rule and/or Section 7. The *RRMESA Program Guidelines* outlines best management practices (BMPs) for bridge maintenance and repair activities.

Snohomish County Road Maintenance Performance Standards and Standard Operating Procedures.
Performance Standards and Standard Operating Procedures provide guidelines for maintenance and repair of the roadway system including bridges. The standards identify outcomes, equipment, materials, techniques and other information to carry out activities of the Road Maintenance Division.

Snohomish County Drainage Manual.
The Drainage Manual sets forth requirements for identifying, selecting, designing and implementing stormwater BMPs for unincorporated portions of the County including bridge maintenance and repair. The Manual meets the requirements of County Codes and state water quality standards, and complies with the Clean Water Act, Puget Sound Water Quality Management Plan and the National Pollution Discharge Elimination System (NPDES) Phase 1 Municipal Stormwater Permit.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

No pending government approvals or proposals are known to affect the geographic area covered by this proposal at this time. However, Washington State regulations addressing water crossings (WAC 220-110-070) may result in new bridge construction as culverts are replaced. Culvert replacement resulting in new bridge construction, which is not covered under this SEPA Checklist, would increase the inventory of bridges and, thereby, increase the demand for maintenance and repair activities.

10. List any government approvals or permits that will be needed for your proposal, if known.
Government approval and permits required for bridge maintenance and repair activities would vary by activity and location. Each activity would be individually reviewed and government approvals and permits would be obtained as needed. Required permits and approvals may include:

- **Endangered Species Act (ESA)**
  Bridge maintenance and repair activities must comply with the National Oceanic and Atmospheric Administration 2(d) rule for threatened Chinook salmon as well as Section 4(d) which prohibits "take" of endangered species. The Road Maintenance Division participates in the RRMESA which satisfies requirements under Section 4(d). Additionally, when bridge repair and maintenance activities require a federal authorization or utilize federal funds, a Section 7 consultation may be necessary to ensure activities do not jeopardize the continued existence of an endangered species or destroy or adversely modify critical habitat [16 U.S.C. §1536(a)(2)].

- **Clean Water Act**
  Pursuant to the Federal Water Pollution and Control Act (Clean Water Act), as amended, a Section 404 permit from the U.S. Army Corps of Engineers would be required for any discharge of dredge or fill material waterward of the ordinary high water mark, or mean higher high tide line in tidal areas, in waters of the United States. Additionally, Section 402 of the Clean Water Act established the NPDES program; bridge maintenance and repair activities are covered under the County Phase 1 General Municipal Stormwater Permit.

- **Rivers and Harbors Act**
  This act regulates any work in, over, or under navigable waters of the United States. A permit from the U.S. Army Corps of Engineers would be required for work that requires dredging, excavation or pier construction in navigable waters.

- **Migratory Bird Treaty Act**
  This act makes it illegal for anyone to take, possess, import, export, transport, sell, purchase, or barter any migratory bird, or the parts, nests, or eggs of migratory birds. Migratory birds including the American Dipper (*Cinclus mexicanus*) are known to utilize bridges as habitat. A permit may be required from the U.S. Fish and Wildlife Service for individual bridge maintenance and repair activities.

- **National Flood Insurance Program**
  The Federal Emergency Management Agency (FEMA) requires a permit be issued for activities that occur within designated Flood Hazard Areas. Bridge maintenance and repair activities that may result in either raising or lowering of the ground elevation within the floodplain may require a Flood Hazard Permit. In most cases, requirements under the National Flood Insurance Program are satisfied by the Road Maintenance Division's participation in the RRMESA program.

- **Protected Fish or Wildlife**
  All birds (not classified as game birds, predatory birds or designated as an endangered, threatened or sensitive species) and all bats (except those found in or adjacent to a dwelling or other occupied building) are identified as protected wildlife and cannot be hunted, possessed, or killed (WAC 232-12-011). Bridge maintenance and repair activities may be scheduled to avoid impacts to protected fish and wildlife.

- **Hydraulic Project Approval (HPA)**
  The Washington Department of Fish and Wildlife must issue an HPA for bridge maintenance and repair activities affecting "waters of the state" (WAC 220-110). Activities may be covered under a General HPA or project specific "Individual" HPA.

- **Shoreline Management Act**
  Pursuant to the Shoreline Management Act of 1971 bridge maintenance and repair activities may require a Shoreline Substantial Development Permit for activities within shoreline environments that improve bridge structures (WAC 173-27-040).

- **Snohomish County Code (SCC)**
  Bridge maintenance and repair activities are required to comply with applicable provisions of SCC Chapter 30.63 (Critical Areas Regulations), Chapter 30.63A (Drainage), Chapter 30.63C (Low Impact Development), and Chapter 30.44 (Shoreline Permits).

11. Give brief, complete description of your proposal, including the proposed uses and size of the proposal and affected geographic area. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on proposal description.)
    The Road Maintenance Division maintains and repairs the County inventory of bridges. Maintenance and repair activities are generally triggered by inspections conducted by the County Engineering Services Division. Typical bridge maintenance and repair activities would include the following:

    Bridge Cleaning:
    Bridge cleaning includes sweeping, using a truck mounted cleaning device called a "Vactor/Jetter Truck," pressure washing, wire brushes and sand blasting or shot blasting

to clean bridge surfaces as well as painting, garbage and graffiti removal. The Vactor/Jetter Truck uses a freshwater supply and a high pressure pump system to lift water, sediment, pollution and debris from structures. Painting generally includes a coat of paint primer as well as one or more coats of paint applied by brush. Garbage would be removed from the bridge deck and beneath the bridge structure. Removed garbage would be taken to an appropriate recycling or disposal facility.

***Debris Removal*:**
Debris removal would include removal or repositioning of debris and logs from bridge abutments, wing walls, footings and piers. Work crews would use hand tools such as shovels, rakes, chainsaws and brooms as well as heavy equipment such as dump trucks and cranes. Logs from under the bridge structure may be cut or left whole, and removed or repositioned downstream of the bridge.

Superstructure Maintenance and Repair:
Superstructure maintenance and repair would include steel, concrete and timber repairs. Repair activities would depend on the material the bridge is constructed of and the type of repair. In general, repair crews would use heat straightening, cutting with a torch, and welding to conduct minor repairs of steel bridges. To repair concrete bridges, crews would typically deliver concrete to the site on trucks or mix small quantities of concrete for minor repairs and patches. Repairs to timber bridges would often include refastening bridge components such as braces, decking and piles with spikes, bolts or metal bands. In some cases replacement of rotted elements such as stringers, caps, cross beams, bulkheads, wing-walls, and pilings would be required. Rotted elements may be replaced with state-approved preservative-treated wood, steel or concrete substitutes.

Damage may occur to fenders and dolphin piles on all bridge types due to floating logs and debris. Repairs generally include removal of the damaged fender or pile, and installation of a new fender or pile. Crews would use both hand tools and heavy equipment such as cranes during all superstructure maintenance and repair activities.

***Railing, Approach Repaving, and Deck Repairs and Replacement*:**
Bridge deck surfaces, approach surfaces and railing may require repair and replacement due to wear, age or vehicle collision-damage. Older or damaged rails would be removed and replaced with new parts and in compliance with the manual on Uniform Traffic Control Devices. Work crews would use hand tools as well as a truck-mounted auger and other equipment to repair or replace railings.

Approach repair includes leveling concrete or asphalt approaches to the bridge, replacing sub-grade material, if needed, and repaving. Timber deck surfaces and curbs would be replaced in-kind with state-approved preservative-treated wood. Other road surfaces would be repaired in accordance with County Road Maintenance Performance Standards and Standard Operating Procedures.

Repair of Deck Expansion Joints and Deck Sealing:

In order to repair deck expansion joints, work crews may use sand blasting and grinding to remove deteriorating road surfaces, repair concrete edges and apply new joint material. Typically, joints are replaced with in-kind concrete patches or retrofitted with new joints that reduce the need for future maintenance. Deck sealing involves cleaning the deck surface and spreading a sealing compound. The sealing compound protects bridge deck surfaces from freezing and prevents corrosion.

Scour Protection:

In order to protect the bridge from water scour, rocks and logs may be placed or secured within the water around bridge abutments, footings and piers. Crews would use heavy equipment such as cranes and back hoes to position rocks and logs as well as hand equipment such as compactors and shovels as needed.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of you proposed proposal, include a street address, if any, and section, township, and range, if known. If proposal would occur over a range of area, provide the range or boundaries of the affected geographic area. Provide a legal description, affected geographic area plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.
Maintenance and repair activities would occur on bridges in the County Bridge Inventory throughout the County. See *Map 1 – Snohomish County – Public Lands, Township/Range Section* for further information on the proposal location.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (shown in ***bold*** type): flat, rolling, hilly, steep slopes, mountainous, other.

The terrain varies from site to site, but in general most stream crossings in the County are located at low gradient areas. The County encompasses approximately 2,098 square miles. Six major topographic plateaus separated by narrow streams and broad river channels characterize the western portion of the County. Floodplains formed by the Snoqualmie, Skykomish, Snohomish, and Stillaguamish Rivers create topographic boundaries between the plateaus. The land in this area is flat to rolling in bench-like glaciated plains. The eastern portion of the County contains the foothills and mountains of the Cascade Mountain Range. Very steep mountains and narrow valleys characterize this area. The Sauk River forms a floodplain of limited extent along the northeast boundary of the County.

b. What is the steepest slope on the site (approximate percent slope)?

Slopes in the County vary widely, ranging from 0 percent to over 50 percent.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

Natural Resources Conservation Service (formerly the Soil Conservation Service) has mapped six general soil types in the County.

1. **Puget-Sultan-Pilchuck: found on flood plains along the major streams in the northern, central and southern parts of the County. This soil type is very deep, and drainage varies from poor to excessive.**
2. **Norma-Lynnwood Custer: found in the north-central part of the County. Very deep, drainage varies from poor to excessive.**
3. **Alderwood Everett: found adjacent to Puget Sound, along the western boundary of the County. Moderately to very deep, moderately to somewhat excessively drained.**
4. **Tokul-Pastik: found in the central, northern, and southern parts of the County. Moderately to very deep, moderately well drained.**
5. **Elwell-Olomount-Skykomish: found in the mountainous eastern part of the County. Moderately to very deep, moderately well drained to somewhat excessively drained.**
6. **Getchell-Oso: found in the mountainous northern and southern edges of the County. Moderately deep and moderately well drained.**

These general types are divided into approximately 40 different kinds of soil. Soil types would vary by site. Minor impacts to soil may occur during bridge maintenance. No impact to agricultural soil is anticipated.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

The Puget Sound region, including the County, is susceptible to several types of hazardous soil or geological conditions. These include erosion, landslide, and seismic hazards. Most of the bridge maintenance sites have had no indication of unstable soils, and are part of the existing road system. Public Works will prepare a Geological Technical memo for all major soil disturbing activities.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, or grading proposed. Indicate source of fill.

Filling, excavation and grading would be proposed for some bridge maintenance work orders. If fill or excavation is required, every effort would be made to limit quantities. Fill material would come from either the County quarry or County-approved commercial sources. Any fill or excavation that is required below the ordinary high water of a stream or river or within a wetland would be subject to additional environmental review and permitting requirements.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Minor amounts of erosion may occur during bridge maintenance and repair activities. Any increase in erosion or turbidity would be temporary in nature and will be addressed through implementation of the *Snohomish County Drainage Manual*, *RRMESA Program Guideline* BMPs and *Snohomish County Road Maintenance Standard Operating Procedures*.

g. About what percent of the site will be covered with impervious surfaces after project construction?

Generally, maintenance and repair activities would not increase the amount of impervious surface area.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Appropriate BMPs identified in permits, the *Snohomish County Drainage Manual*, *RRMESA Program Guideline* and *Snohomish County Road Maintenance Standard Operating Procedures* will be adhered to during all work. Work would be performed during no or low flow conditions, or would adhere to permit requirements such as temporarily diverting water from work areas. Temporary erosion control measures such as temporary protective coverings, silt control fences, check dams, filter fabric, straw bales, temporary diversions, and other appropriate erosion control measures will be utilized as necessary to control and minimize erosion and turbidity during project activities. Equipment would be staged from the paved area of the road or equipment staging with temporary erosion and sediment control measures. Any bare soil that may result from bridge maintenance activities would be reseeded or replanted immediately upon completion of the work.

2. Air

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Construction equipment and construction-related activities would result in minor, temporary increases in emissions. Some dust may be generated during filling, grading or excavating activities but would be temporary in nature. There would be no further emissions once repairs are complete.

b. Are there any off site sources of emissions or odor that may affect your proposal? If so, generally describe.

Does not apply.

c. Proposed measures to reduce or control emissions or other impacts to air, if any.

Emissions from equipment and vehicles would not exceed federal and state air quality standards and will meet Occupational Safety and Health Administration (OSHA) and

Washington Department of Occupational Safety and Health (DOSH) standards. Vehicles will be turned off when idle.

3. Water

a. Surface Water

1) Is there any surface water body on or in the immediate vicinity of the site (including year round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

All bridge maintenance and repair work would occur in the immediate vicinity and over surface water bodies such as streams and rivers. In general County maintained bridges occur over tributaries to the Stillaguamish River and its north and south forks, as well as the Snohomish River and its two major sources, the Skykomish and Snoqualmie Rivers. These rivers have their sources in the forested mountain areas and flow generally west through broad agricultural floodplains. Smaller stream basins are generally oriented north/south, and several of these, such as North Creek, Swamp Creek, and Quilceda Creek, flow through rapidly developing suburban and urban areas. Bridge maintenance work may also occur over the Sauk River or its tributaries and areas that are tidally influenced by the Puget Sound. Tidewaters of the Puget Sound mix with freshwater in the Snohomish River estuary (encompassing Ebey, Union, and Steamboat Sloughs).

Streams are classified by the County as shorelines of the State, fish bearing, non-fish bearing perennial or non-fish bearing seasonal, based on a number of factors, including channel width, gradient, flow, impoundment, fish use, diversion, and other factors. The County also contains numerous wetland areas, categorized into four types depending on their size and functions (SCC 30.62.300). Natural resource specialist would review each bridge maintenance project and site to ensure that activities would comply with all applicable state, federal and local regulations.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

Yes. The maintenance activities would occur on or adjacent to bridges. In many cases, the work would be done from the bridge deck (e.g., stringer replacements would be accomplished by going down through the deck rather than by working from below, in the streambed). Some work may require a worker (carrying hand tools) to wade into the streambed to access bridge components. Other activities would also require in-stream work. In-stream work would generally be done under no or low flow conditions and would comply with all applicable permit requirements and regulations.

While maintenance activities may occur in the vicinity of wetlands, no impacts to wetlands are anticipated. During bridge maintenance activities, equipment (backhoe, excavator, etc.) would not be staged within the ordinary high water mark.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

In general, fill would not be placed in or removed (dredged) from surface waters or wetlands as part of the bridge repairs. However, some projects require small quantities of rock or fill such as the construction or replacement of bulkheads or wing-walls. Any sites requiring the placement of riprap (rock), fill or dredging would undergo further environmental review and permitting. Fill would come from either a County quarry or County-approved commercial sources.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No permanent surface water withdrawals or diversions are anticipated. However, temporary diversion of flow may be required for some activities. Dewatering may also require the withdrawal of surface water and shallow groundwater during maintenance and repair work. If surface water withdrawal is needed, then water would be discharged in an upland area with appropriate erosion control BMPs. These activities would be done during periods of low or no flow conditions when possible, and in compliance with all permit provisions.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

Most activities would occur within the 100-year floodplain. All applicable permits would be acquired before performing the work.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

All appropriate BMPs and containment measures would be used to prevent construction debris or other waste materials from entering surface waters.

b. Ground

1) Will ground water be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses, and approximate quantities withdrawn from the well? Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

No water would be withdrawn or discharged to groundwater during bridge maintenance activities.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: domestic sewage; industrial, containing the following chemicals...; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

Does not apply.

c. Water Runoff (including storm water)

1) Describe the source of runoff (including stormwater) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Stormwater runs off bridge surfaces and into roadside ditches, vegetated swales or catch basins and is released into the applicable waterway. In general, project work would not increase the amount of runoff or impede its flow.

2) Could waste materials enter ground or surface waters? If so, generally describe.

Waste materials generated from bridge maintenance activities would be disposed of off-site in accordance with applicable regulations. Accidental spills may occur during the course of maintenance activities. Spills would be immediately addressed using on-site spill kits, thereby preventing potential discharges to ground or surface waters.

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

Bridge maintenance activities would not directly alter pre-existing drainage patterns in the vicinity of the site. However, maintenance may indirectly affect drainage by restoring flow under bridges (e.g. as a result of debris removal) or by repairing bridge infrastructure.

d. Proposed measures to reduce or control surface, ground, runoff water, and drainage pattern impacts, if any.

Appropriate measures would be taken to reduce impacts to surface and groundwater runoff. Where possible drainage systems will be designed to collect and filter runoff, reducing pollutants and the possibility of erosion. BMPs specified in permits and applicable regulatory requirements will be used during all ground-disturbing work. If possible, work will be done during periods of low or no flow to minimize adverse environmental impacts. For any in-stream work where flow is occurring at the time of construction, applicable permit requirements will be followed such as temporarily diverting flow around work areas. Equipment staging areas would have temporary erosion and sediment control fences or equipment would be staged from the paved area of the road. All project work will adhere to applicable regulatory requirements. As appropriate, BMPs to be utilized to control and minimize site erosion and turbidity may include but not limited to:

- **Silt control fencing for perimeter flow containment, check or diversion dams for water flow control and sediment containment, and filter fabric fencing as perimeter sediment containment barrier.**
- **Hydro-seeding and hand seeding of grass on exposed soil areas to prevent soil loss, and plastic covering of bare soil areas to exclude rain contact with exposed areas.**
- **Pumping water flows around site to create dry working conditions, and staging machinery use out of water flow areas.**

4. Plants

a. Check the types of vegetation found on or in close proximity to the site:

- ☒ **Deciduous trees: alder, maple, willows and other native and non-native species**
- ☒ **Evergreen trees: fir, cedar, pine and other native and non-native species**
- ☒ **Shrubs: salmonberry, thimbleberry, snowberry, sword fern, and other native and non-native species**
- ☒ **Grass: native and non-native grasses, lawns**
- ☒ **Pasture: pasture grasses occur throughout the rural areas of the County**
- ☒ **Crop or grain: wheat, hops and other non-native species**
- ☒ **Orchards, vineyards or other permanent crops**
- ☒ **Wet soil plants: cattail, buttercup, bulrush, skunk cabbage and other native and non- native species**
- ☒ **Water plants: water lily, eelgrass, milfoil, other native and non-native species**
- ☒ **Other types of vegetation: Himalayan blackberries, reed canary grass and other native, non-native species, and ornamental species are found throughout the County**

Vegetation would vary by site. The County has a variety of both native and non-native plant species. Any of the types of vegetation listed above may occur on or adjacent to a site.

b. What kind and amount of vegetation will be removed or altered?

Most bridge maintenance activities would not require the removal of vegetation. However, in some cases vegetation trimming or removal is required (e.g. when an undercut or leaning tree poses a threat to the bridge). Only vegetation required to be removed for maintenance or to maintain the safety of the bridge would be removed; the amount trimmed or removed is anticipated to be nominal. Vegetative ground cover would be re-established after work is completed.

c. List threatened and endangered plant species known to be on or near the site.

According to the Washington State Department of Natural Resources Natural Heritage Information System there are 1 endangered species, 5 Threatened species, 20 Sensitive species, and 7 species of Potential Concern in the County. Under the Federal Endangered Species Act there is one plant Species of Concern.

If a threatened or endangered plant species is suspected to be on or near a site, an environmental review would be made of the site to confirm the presence or absence of threatened and endangered plant species. Where such species are discovered, all work will comply with the Endangered Species Act and other applicable regulations. This may include implementation of BMPs developed for federal- and state-listed species under the RRMESA.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation of the site, if any:

Any soils exposed by construction would be re-vegetated to prevent erosion. BMPs would be used whenever applicable. All work will conform to issued permits and other applicable regulations.

e. List all noxious weeds and invasive species known to be on or near the site.

Noxious weeds and invasive species would vary by site. Several noxious weeds are known to occur near County maintained roadways and may occur near County maintained bridges. These species are:

- **Tansy ragwort,**
- **Canada and Bull thistle,**
- **Hawkweed,**
- **Knapweed,**
- **Garlic mustard,**
- **Wild chervil,**
- **Common fennel,**
- **Purple loosestrife,**
- **Policeman's helmet,**
- **Poison hemlock,**
- **Spurge laurel,**
- **Dalmation toadflax,**
- **Giant hogweed, and**
- **Gorse.**

5. Animals

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site. Examples include:

birds: hawks, heron, eagle, songbirds, other: owls, ducks, woodpeckers, ravens
mammals: domestic dog, domestic cats, deer, bear, elk, beaver, river otter, weasles
other: opossum, raccoon, coyote, small rodents,
fish: bass, salmon, lamprey, trout, herring, shellfish, other:

Any of the above types of wildlife may occur on or adjacent to a site. American Dipper nests are located on a small number of the County maintained bridges. Many sites would be adjacent to fish-bearing streams (primarily salmon and trout) or their tributaries. Bridge maintenance activities would undergo appropriate review and will comply with all provisions of the Endangered Species Act, HPA, and other applicable regulatory requirements.

b. List any threatened and endangered wildlife species known to be on or near the site.

Threatened and endangered wildlife would vary by site. Threatened, endangered, sensitive or priority species found within the County include:

Common Name	Latin Name	Federal Designation	State Designation
Puget Sound ESU Chinook salmon	*Oncorhynchus tshawytscha*	Threatened	Candidate
Puget Sound DPS Steelhead	*Oncorhynchus mykiss*	Threatened	N/A
Bull trout	*Salvelinus confluentus*	Threatened	Candidate
Pygmy whitefish	*Prosopium coulteri*	N/A	Sensitive
Margined sculpin	*Cottus marginatus*	N/A	Sensitive
Olympic mudminnow	*Novumbra hubbsi*	N/A	Sensitive
Oregon spotted frog	*Rana pretiosa*	Threatened	Sensitive
Larch mountain salamander	*Plethodon marselli*	N/A	Sensitive
Common loon	*Gavia immer*	N/A	Sensitive
Peregrine falcon	*Falco peregrinus*	Species of Concern	Sensitive
Bald eagle	*Haliaeetus leucocephalus*	Species of Concern	Sensitive
Marbled Murrelet	*Brachyramphus marmoratus*	Threatened	Threatened
Northern spotted owl	*Strix occidentalis caurina*	Threatened	Endangered
Yellow-billed cuckoo	*Coccyzus americanus*	Threatened	Candidate
Fisher	*Martes pennanti*	Endangered	Endangered
Gray wolf	*Canis lupus*	Endangered	Endangered
Grizzly bear	*Ursus arctos horribilis*	Threatened	Endangered
Southern resident killer whale	*Orcinus orca*	Endangered	Endangered

Where federally threatened species are found, all work will conform to the requirements of the Endangered Species Act. Where state listed species or Priority Habitats and Species are found, the *Washington Department of Fish and Wildlife Priority Habitats and Species (PHS)* recommendations will be followed, when appropriate. The most current PHS list can be found at: http://wdfw.wa.gov/hab/phs/phs_list_2010.pdf.

c. Is the site part of a migration route? If so, explain.

Yes, the County is within the Pacific Flyway for migratory birds of all species. The flyway stretches between Alaska and South America. All migratory birds are protected by the Migratory Bird Treaty Act (MBTA) administered by the U.S. Fish and Wildlife Service. Some sites may also be over and adjacent to streams used by fish for spawning, feeding or rearing, or tributaries to such streams.

d. Proposed measures to preserve or enhance wildlife, if any:

If in-stream work is required, then it would typically be done in the summer or fall during periods of low or no flow or in accordance with conditions of a HPA. BMPs such as the use of silt fences to control sediments will be used where applicable. Other applicable federal, state or local regulations will be adhered to during bridge maintenance activities.

e. List any invasive animal species known to be on or near the site.

Invasive animal species would vary by site.

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

N/A

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

N/A

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

Vehicles and equipment would be turned off when idle and will be in compliance with OSHA and DOSH standards. All equipment is maintained so that fuel efficiency is maximized.

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste that could occur as a result of this proposal? If so, describe.

Construction hazards common to the use of heavy equipment (such as fires or injury) could occur during maintenance activities. A potential exists for vehicles to leak small amounts of oil onto road surfaces. Spill control kits are carried on County vehicles to contain and clean up spills. Leaks would be promptly repaired upon detection.

1) Describe any known or possible contamination at the site from present or past uses.

Bridge maintenance sites may be contaminated from an accidental spill or illegal dumping by others. If a site is found to be contaminated, all work would stop and appropriate measures would be taken to contain the contamination and remove the spill material from the site. Other agencies such as the Washington State Department of Ecology (DOE) would be notified if appropriate.

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

Some of the materials historically used to construct bridges are now recognized as hazardous. These materials include creosote timbers and lead based paint. Utilities are also typically co-located within the bridge ROW corridor; these utilities may include overhead power lines and utility conduits under the bridge deck. Prior to commencement of bridge maintenance utility providers would be contacted in order to coordinate maintenance activity and if needed request temporary shut off during bridge repairs.

3) Describe any toxic or hazardous chemicals that might be stored, used or produced during the project's development or construction, or at any time during the operating life of the project.

Several hazardous chemicals are used to maintain bridges such as asphalt (for surface and approach paving), joint compound and chip seal oil. Bridge maintenance equipment also utilizes several hazardous chemicals such as: gasoline, diesel fuel, oil, hydraulic fluid, and engine coolants. Thinners, solvents and other cleaning agents may be used in limited circumstances to maintain equipment.

4) Describe special emergency services that might be required.

Fire or ambulance services could be required in the event of a construction accident.

5) Proposed measures to reduce or control environmental health hazards, if any:

Spill control kits are carried in maintenance vehicles. All equipment would be well-maintained and in good repair to prevent the loss of any petroleum products and will comply with OSHA and DOSH standards. Crew leads are equipped with cellular telephones and operators are trained in the safe use of the equipment.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, aircraft, other)?

N/A

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

During maintenance activities (short-term) there may be increased noise from heavy equipment. Some repairs require bridge piles to be replaced or additional piles to be installed. Piles would be vibrated or hammered into place. Most construction noise would occur during daylight hours, Monday through Friday. It is possible that some emergency repairs may be required to be performed at night or on weekends. There would be no additional noise impacts once construction is complete.

3) Proposed measures to reduce or control noise impacts, if any:

Maintenance would normally be limited to the hours of 7:00 a.m. – 8:00 p.m., Monday through Friday. Equipment will comply with applicable OSHA and DOSH standards.

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

Bridges are generally in rural and residential areas, within existing developed public rights-of-way. Adjacent properties would include rural, residential, forested, recreational, industrial, commercial, and urban uses.

b. Has the site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to non-farm or non-forest use?

N/A

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling and harvesting? If so, how,

No affects are anticipated to normal business operations of working farms or forest land from proposed bridge maintenance and repair activities, other than temporarily bridge closures. Watershed management practices including forest harvest practices affects the water and sediment discharge from rivers. Higher intensity peak flows and debris can damage bridges and increase the need for debris removal.

c. Describe any structures on the site.

Structures covered by this Environmental Checklist are bridges maintained by the County. The County maintains 201 bridges, which vary in age and materials. Of the bridges currently maintained by the County 42 are of timber construction, 103 are of concrete construction, 21 are predominately of steel construction, 30 are a combination of wood, concrete and steel construction and 4 are culverts of either steel or concrete. County bridges span small tributaries to large rivers. In many cases when older bridges require replacement the new bridge is built in the same location

to align with the road network. Due to this, abandoned bridge components are often found underneath bridges (e.g. old piles).

d. Will any structures be demolished? If so, what?

Does not apply.

e. What is the current zoning classification of the site?

Zoning would vary by site.

f. What is the current comprehensive plan designation of the site?

The Comprehensive Plan designation would vary by site.

g. If applicable, what is the current shoreline master program designation of the site?

The Shoreline Master Program designation would vary by site. Most maintenance projects are shoreline exempt activities pursuant to the County's *Shoreline Management Master Program* (SMMP). Maintenance activities in designated shoreline management areas would undergo appropriate review.

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

Yes. Environmentally sensitive areas such as geologically unstable areas, fish and wildlife habitat conservation areas, and streams or wetlands and their buffers are classified as critical areas. These critical areas may occur in the vicinity of or adjacent to public roadways. In general, County bridge sites are inherently within environmentally sensitive areas, due to their proximity to surface waters.

i. Approximately how many people would reside or work in the completed project?

Does not apply.

j. Approximately how many people would the completed project displace?

Does not apply.

k. Proposed measures to avoid or reduce displacement impacts, if any:

Does not apply.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

All work would be consistent with the applicable area comprehensive plans and policies.

m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:

Does not apply.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle or low-income housing.

N/A Does not apply.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

Does not apply.

c. Proposed measures to reduce or control housing impacts, if any:

Does not apply.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

Existing bridge heights vary. The repair and maintenance of bridges would not affect (*i.e.* increase or decrease) the height of any structures. Bridges in the County are made of timber, concrete or steel.

b. What view in the immediate vicinity would be altered or obstructed?

Does not apply.

c. Proposed measures to reduce or control aesthetic impacts, if any:

Any bare soil exposed by maintenance activities will be reseeded or re-vegetated.

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

Maintenance of bridges is usually done during the day. However, during urgent or emergency situations, it is possible that some work activity may occur at night and require that spotlights be used.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

Does not apply.

c. What existing off-site sources of light or glare may affect your proposal?

Does not apply.

d. Proposed measures to reduce or control light and glare impacts, if any:

Does not apply.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

Residents may use the surface waters and areas adjacent to bridges for informal recreation. Recreational opportunities would vary by site.

b. Would the proposed project displace any existing recreational uses? If so, describe.

It is unlikely that routine bridge maintenance activities would substantially interfere with any recreational uses. It is possible that some projects may impair access to recreational opportunities during maintenance activity, for example, if a bridge closure is required. Pedestrian access may also be temporarily limited.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

Bridge closures would be avoided where possible. If a closure is necessary, a detour route would be provided. Every attempt would be made to avoid impairing public access. Traffic control devices such as cones, signs, and flaggers would be used to direct motorists around the site and to alternate access. Whenever possible, advance notice will be provided.

13. Historic and Cultural Preservation

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, site, or local preservation registers located on or near the site? If so, generally describe.

The County maintains an inventory of 201 bridges. The vast majority of these bridges are relatively new (constructed since 1971) and do not qualify as historic structures.

The Washington State Department of Transportation has developed a list of Washington State Historic Highway Bridges. This list identifies eight bridges maintained by the County that have been determined eligible or potentially eligible for the National Register of Historic Places. An additional bridge identified on the list has since been demolished and a replacement span constructed.

Bridge maintenance activities such as painting, replacing structural elements, and other measures determined necessary to preserve a span's structural integrity and functional operation, do not typically adversely affect the historic character of a bridge. If it is determined that a particular maintenance activity could adversely affect a historic bridge's character, the County would evaluate the feasibility of using prudent and feasible measures to avoid the adverse effect. The County will comply with all applicable regulatory requirements.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site. Please list any professional studies conducted at the site to identify such resources.

The County would evaluate project locations that involve ground disturbance in native soils or other sites with a higher probability for proximity to recorded cultural sites. Activity locations would be mapped and compared to the Geographic Information System (GIS) layer of known cultural sites provided by Washington Department of Archaeology and Historic Preservation (DAHP) as part of a data sharing agreement.

If a project area is in close proximity to a known cultural site, appropriate tribal liaisons are notified and information related to inadvertent discoveries is provided to work crews. A professional archeologist would be consulted for bridge maintenance activities that directly intersect known archeological or historic sites. An archeological survey may also be conducted, if determined necessary, to identify whether any historic and cultural resources could be affected by the maintenance activity. Bridge maintenance projects typically occur on the bridge, beneath or adjacent to the bridge in areas that have been extensively disturbed.

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

A cultural resources evaluation would be conducted for activities that involve ground disturbance into native soils or other sites with a higher probability for proximity to recorded cultural locations. Activity locations would be mapped and compared to GIS data provided by DAHP. If necessary, a cultural resources investigation may be conducted by an archaeologist at the project site, within a defined Area of Potential Effects (APE), to determine the project's potential effects to below ground resources. If a cultural resource investigation is required, the County would consult with area tribes and DAHP prior to commencing the maintenance activity.

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

If any ground-disturbing activities or other project activities related to bridge maintenance uncover protected cultural material (e.g., bones, shell, stone or antler tools), all work in the immediate vicinity would stop, the area would be secured, and any equipment moved to a safe distance away from the location.

If any ground-disturbing activities or other project activities uncover human remains, all work in the immediate vicinity would stop, the area secured, and any equipment would be moved to a safe distance away from the location. The on-site supervisor would then follow the steps specified in the *Snohomish County Archeological Sites Advisory (Assistance Bulletin #103)* or other inadvertent discovery information provided by the Road Maintenance Environmental Staff to the on-site supervisor.

14. Transportation

a. Identify public streets and highways serving the site, or affected geographic area, and describe proposed access to the existing street system. Show on site plans, if any.

The County maintains a system of arterials, collectors, and local access streets throughout the unincorporated areas. All bridges connect to one of these County roads. Bridge maintenance activity would occur within County rights-of-way or an easement adjacent to these public roads.

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

Transit service will vary by site. Four public transit agencies provide service within the County. They are: Sound Transit, Community Transit, Everett Transit, and King County Metro. Sound Transit provides service between King and Snohomish Counties. Everett Transit provides service within the Everett city limits. Metro provides vanpools for King County residents commuting to Snohomish County employers, and Community Transit provides the bulk of transit service in unincorporated Snohomish County as well as providing service to King County.

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

Does not apply.

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private)

Does not apply.

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

Some bridge maintenance activities may occur in the vicinity of water, rail, or air transportation.

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial or non-passenger vehicles). What data or transportation models were used to make these estimates?

Vehicular trips generated during construction would vary by site. There would be vehicles transporting equipment and workers to the site during project activity. The completed projects would not result in increased daily vehicular trips.

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

Temporary detours or lane closures may be required for bridge maintenance. However, long term maintenance of bridges would improve the safe transport of agricultural and forest products.

h. Proposed measures to reduce or control transportation impacts, if any:

Traffic control devices such as cones, signs, and flaggers would be used where necessary to protect and direct motorists during construction. Many smaller bridge maintenance projects would not involve lane or road closures, while in other cases a bridge may be closed for a period of time. Every effort would be made to limit the duration of any bridge closures, and where possible closures would be avoided during peak traffic times. Advance notice of bridge closures or traffic delays will be provided where possible.

15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

No additional or increased need for public services is anticipated.

b. Proposed measures to reduce or control direct impacts on public services, if any.

Where possible, advance notification of bridge maintenance activities would be provided. Due to the urgent nature of some repair activities, advanced notice may not always be possible.

16. Utilities

a. Utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

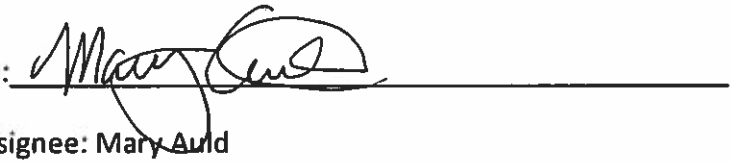
Some bridges have utilities, such as water lines, attached to them. Bridge maintenance activities may require temporary shut off of utilities, but would not impact utilities following construction. No new utilities would be required for bridge maintenance.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Does not apply.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: 

Name of signee: Mary Auld

Position and Agency/Organization: Senior Planner, Snohomish County Public Works

Date Submitted: October 20, 2015